Claims

What is claimed is:

1. A clamp comprising

a frame having opposing sides and a first tube end, the opposing sides further comprising a first opposing side, a second opposing side,

two alignment rods having ends, wherein the ends are connected to the opposing sides and positioned roughly perpendicular to the opposing sides,

a fixed plate connected to the frame near the first tube end and protruding from the frame in a plane substantially parallel to the opposing sides,

a sliding plate, wherein the two alignment rods slidably pass through the sliding plate and wherein the sliding plate protrudes past the first tube end in a direction substantially parallel to the fixed plate,

a closing rod connected to the sliding plate and slidably passing through the second opposing side, wherein the closing rod is substantially parallel to the alignment rods and positioned between the two alignment rods, and

a rod-locking assembly connected to the closing rod and to the second opposing side, the rod-locking assembly having a first position and a second position, the first position allowing the closing rod to move the sliding plate toward and away from the fixed plate and the second position permitting the closing rod to move the sliding plate only toward the fixed plate.

2. The clamp of claim 1, wherein the rod-locking assembly further comprises a rod-locking clamp and a retaining ring, the retaining being fastened to the second opposing side and the rod-locking clamp.

3. The clamp of claim 1, wherein the rod-locking assembly further comprises a rod-locking clamp, a spacer, a retaining ring, and a housing having a third opposing side, the retaining being fastened to the rod locking clamp and being positioned on the housing side of the second opposing side, and the spacer being between the locking clamp and the third opposing side, and the housing being connected to the frame.

4. The clamp of claim 1 further comprising an activation tab.

5. The clamp of claim 1 further comprising a releasing spring between the first opposing side and the sliding plate.

6. The clamp of claim 1 further comprising a housing connected to the clamp enclosing the rod-locking assembly.

7. The clamp of claim 1 further comprising a locking mechanism connected to the rod-locking assembly.

8. The clamp of claim 1 further comprising a damping spring between the sliding plate and the second opposing side.

9. The clamp of claim 1 wherein the fixed plate and the sliding plate protrude approximately 3 inches from the first tube end.

10. The clamp of claim 1 wherein the sliding plate has a curved end.

11. The clamp of claim 1 further comprising a rubber pad connected to the fixed plate and sliding plate.

12. The rubber padding of claim 11 wherein the rubber padding is notched.

13. The clamp of claim 1, wherein the clamp is connected to stationary object.

14. The clamp of claim 1, wherein the clamp is connected to stationary object above a fixed platform.

15. A clamp comprising

a frame having opposing sides and a first tube end, the opposing sides further comprising a first opposing side, a second opposing side,

two alignment rods having ends, wherein the ends are connected to the opposing sides and positioned roughly perpendicular to the opposing sides,

a fixed plate connected to the frame near the first tube end and protruding from the frame in a plane substantially parallel to the opposing sides,

a sliding plate, wherein the two alignment rods slidably pass through the sliding plate and wherein the sliding plate protrudes through the first tube end in a direction substantially parallel to the fixed plate,

a closing rod connected to the sliding plate and slidably passing through the second opposing side, wherein the closing rod is substantially parallel to the alignment rods and positioned between the two alignment rods,

a releasing spring between the first opposing side and the sliding plate, and

a rod-locking assembly connected to the closing rod and to the second opposing side, the rod-locking assembly having a first position and a second position, the first position allowing the closing rod to move the sliding plate toward and away from the fixed plate and the second position permitting the closing rod to move the sliding plate only toward the fixed plate.

16. The clamp of claim 15, wherein the clamp is connected to stationary object.

17. The clamp of claim 15, wherein the clamp is connected to stationary object above a fixed platform.

18. A clamp comprising

a frame having opposing sides and a first tube end, the opposing sides further comprising a first opposing side, a second opposing side,

two alignment rods having ends, wherein the ends are connected to the opposing sides and positioned roughly perpendicular to the opposing sides,

a fixed plate connected to the frame near the first tube end and protruding from the frame in a plane substantially parallel to the opposing sides,

a sliding plate, wherein the two alignment rods slidably pass through the sliding plate and wherein the sliding plate protrudes through the first tube end in a direction substantially parallel to the fixed plate,

a closing rod connected to the sliding plate and slidably passing through the second opposing side, wherein the closing rod is substantially parallel to the alignment rods and positioned between the two alignment rods,

a rod-locking assembly connected to the closing rod and to the second opposing side, the rod-locking assembly having a first position and a second position, the first position allowing the closing rod to move the sliding plate toward and away from the fixed plate and the second position permitting the closing rod to move the sliding plate only toward the fixed plate, and wherein the clamp does not have a means to mechanically advance the sliding plate.

19. The clamp of claim 18, wherein the clamp is connected to stationary object.

20. The clamp of claim 18, wherein the clamp is connected to stationary object above a fixed platform.